

Chimie Organique Série n°5

Exercice 1:

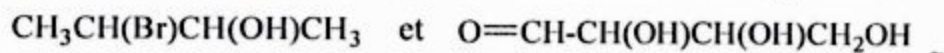
Le plomb Pb appartient à la famille du carbone.

Dans la molécule de tétraméthylplomb PbC_4H_{12} , l'atome de plomb n'est lié qu'à des atomes de carbone.

- 1) Donner la formule semi-développée de la molécule de tétraméthylplomb.
- 2) Donner la représentation de Cram de cette molécule.

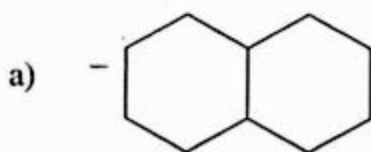
Exercice 2:

Représenter selon CRAM, FISCHER et NEWMANN les composés suivants:

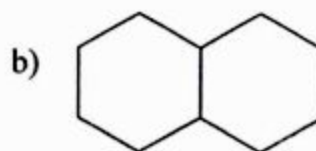


Exercice 3:

Ecrire les composés suivants en projection de NEWMANN:



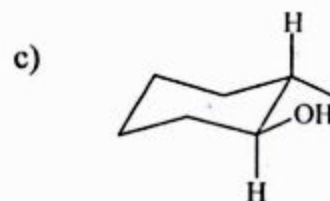
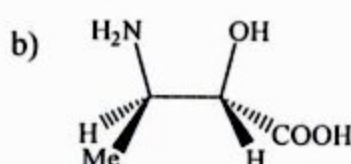
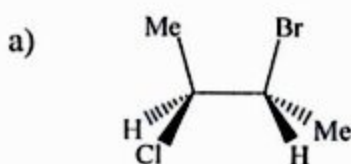
Chaise-chaise



Bateau-bateau

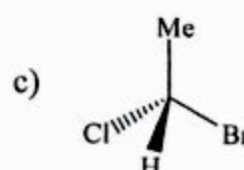
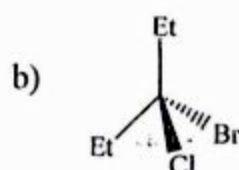
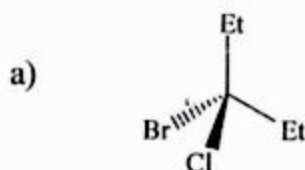
Exercice 4:

Dessiner les projections de Newman des molécules:



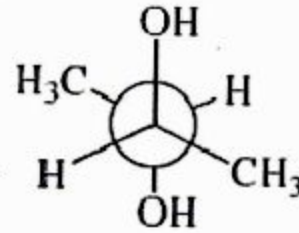
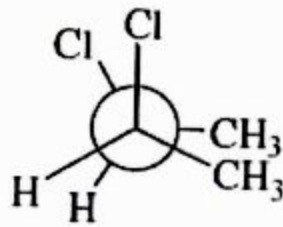
Exercice 5:

Dessiner les projections de Fischer des molécules:



Exercice 6:

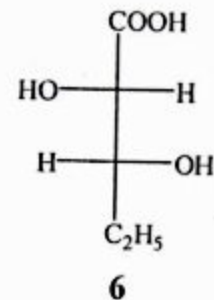
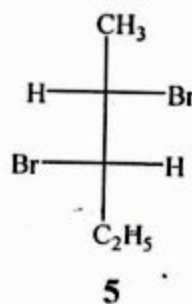
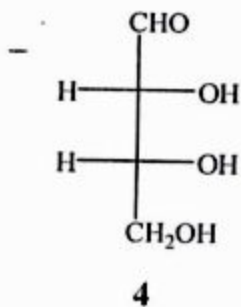
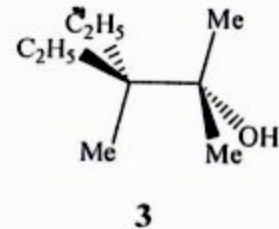
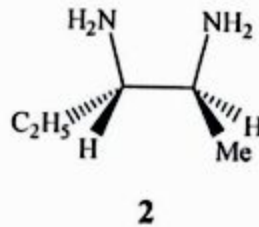
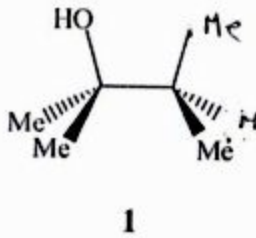
Représenter les molécules 1 et 2 dans leur conformation la plus stable.



Exercice 7:

Représenter selon Newman :

- Les molécules 1, 2, et 3 en conformation synclinale. (5 → 60)
- Les molécules 4, 5 et 6 en conformation anticlinale. (4 → 60)



Données:

- Synpériplanaire = Totalement éclipsée
- Antipériplanaire = Décalée
- Synclinale = Gauche
- Anticlinale = Semi-éclipsée

Exercice 8:

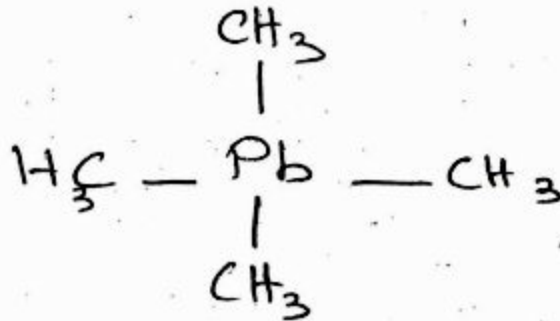
Présenter tous les conformères et donner la courbe de conformation des molécules suivantes:

- 1) 1,2-dichloroéthane.
- 2) 2-chloroéthanol.

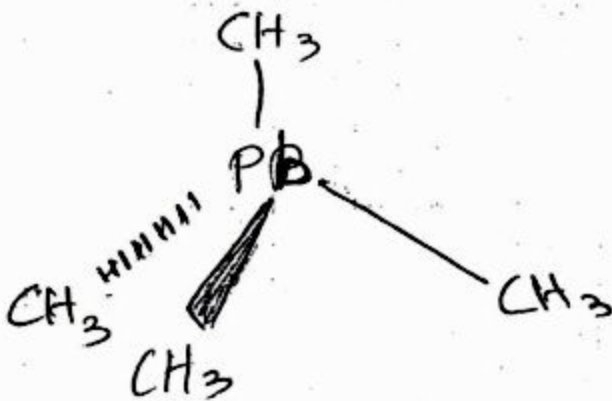
Serie 5

EX 1:

1-

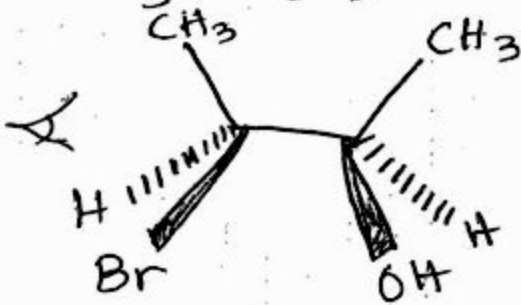
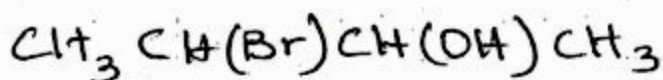


2-

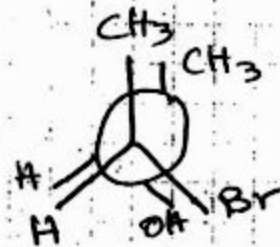


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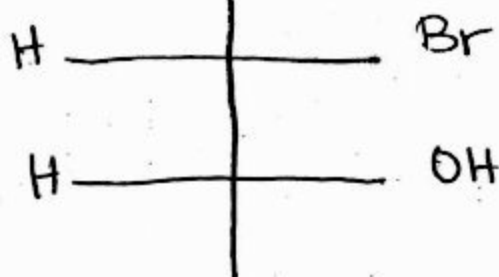
1- Cram

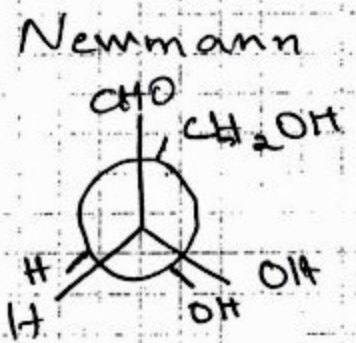
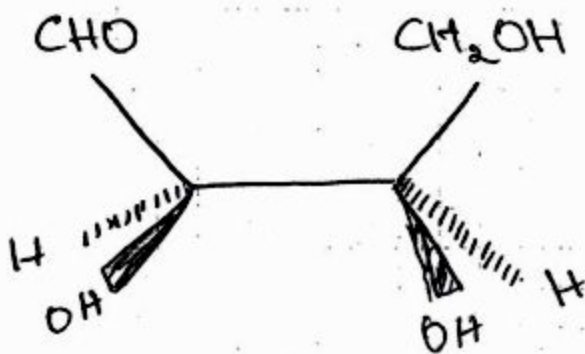
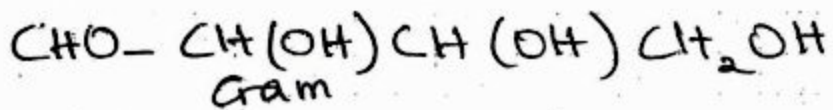


Newmann

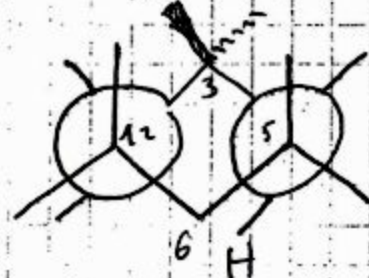
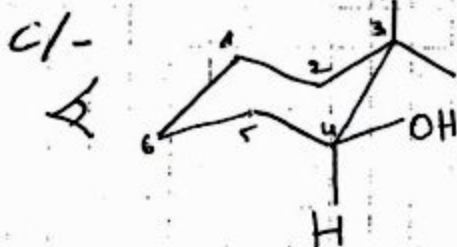
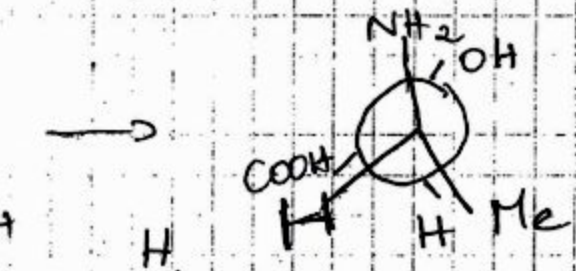
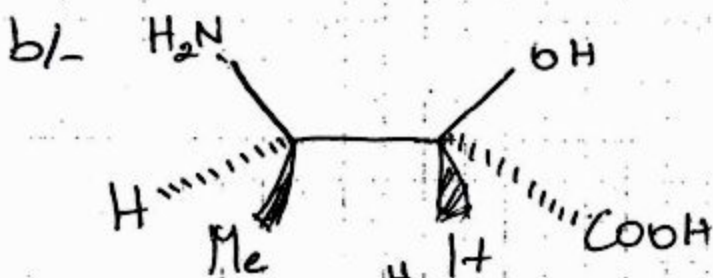
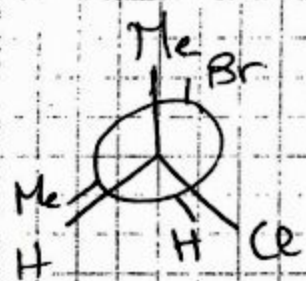
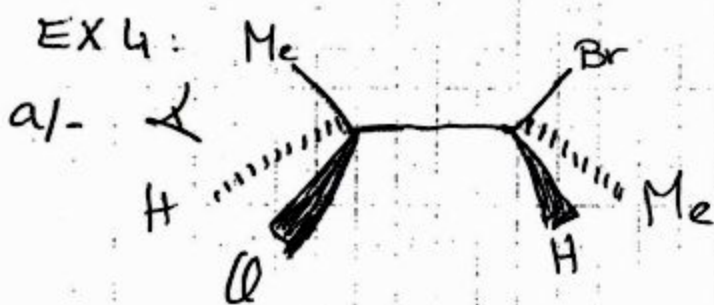
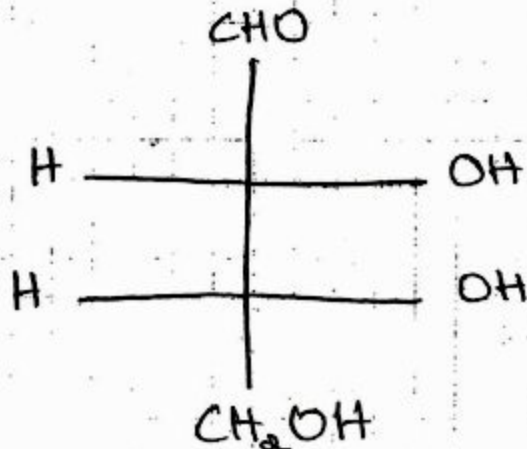


Fischer
CH₃



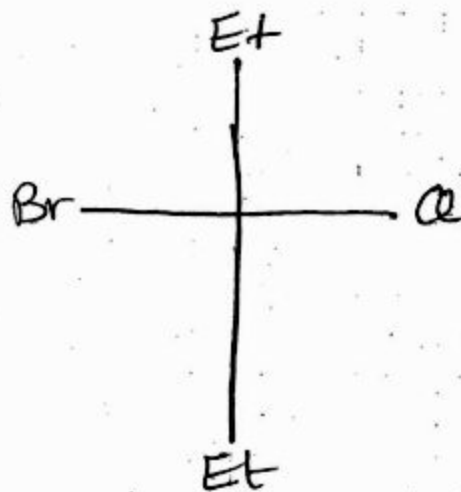
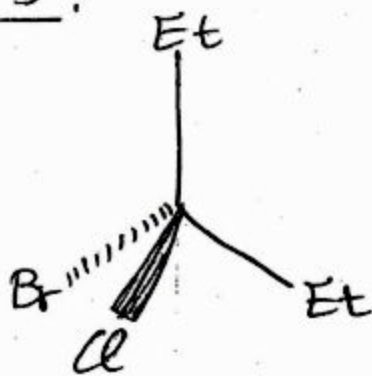


Fischer

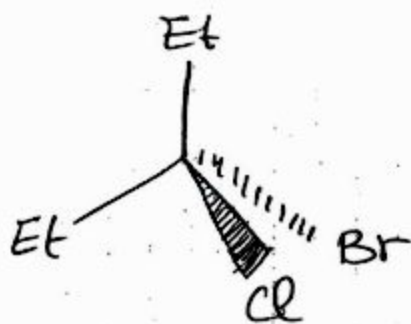


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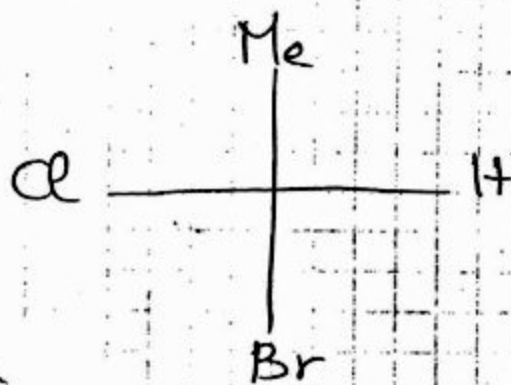
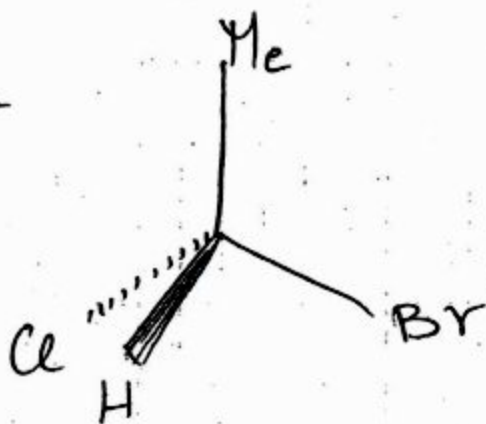
a/-



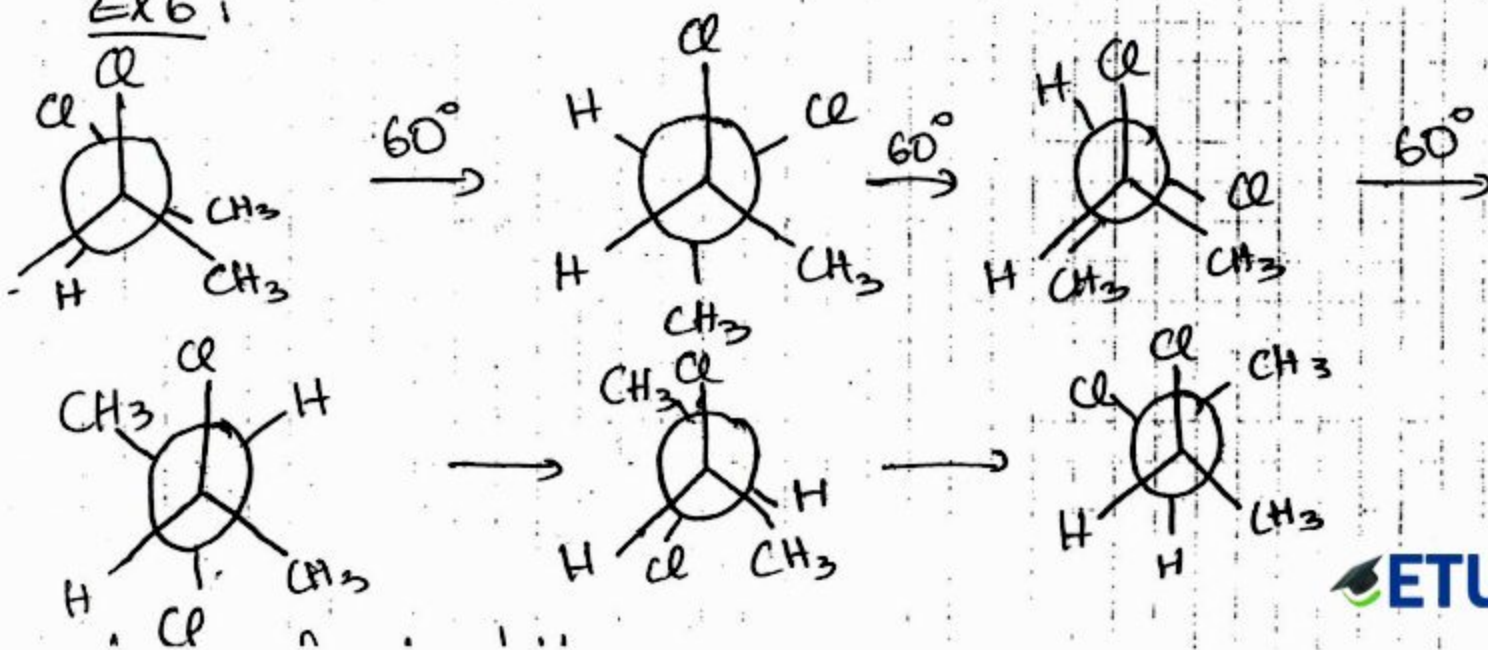
b/-

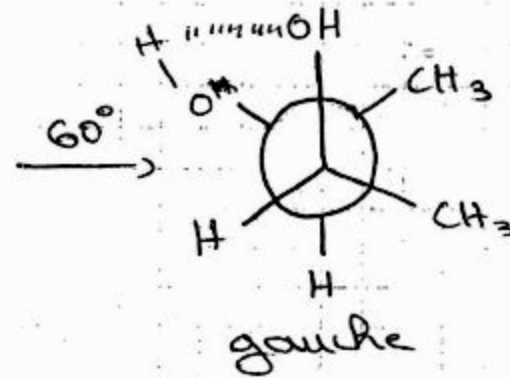
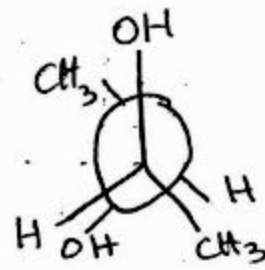
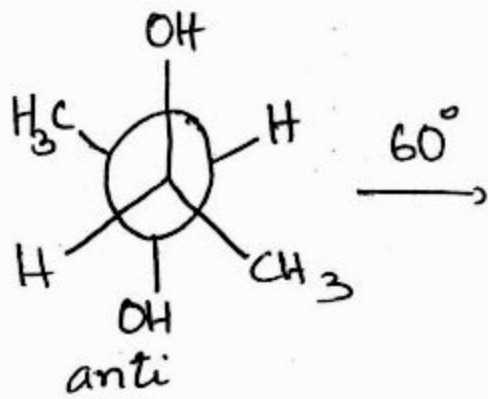


c/-



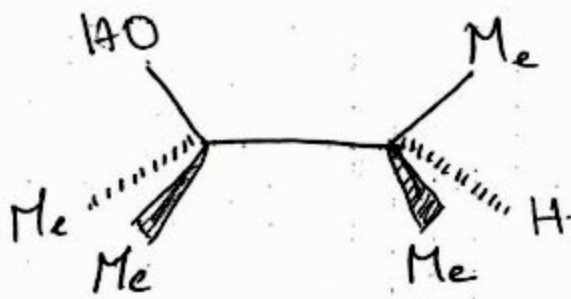
EX 6:



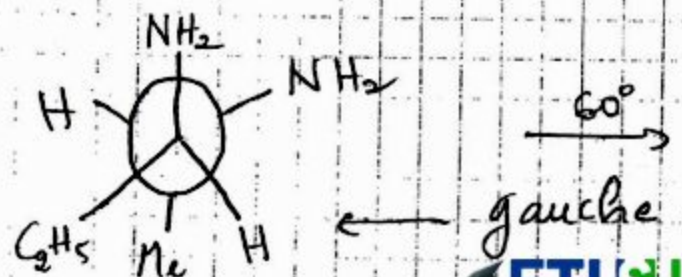
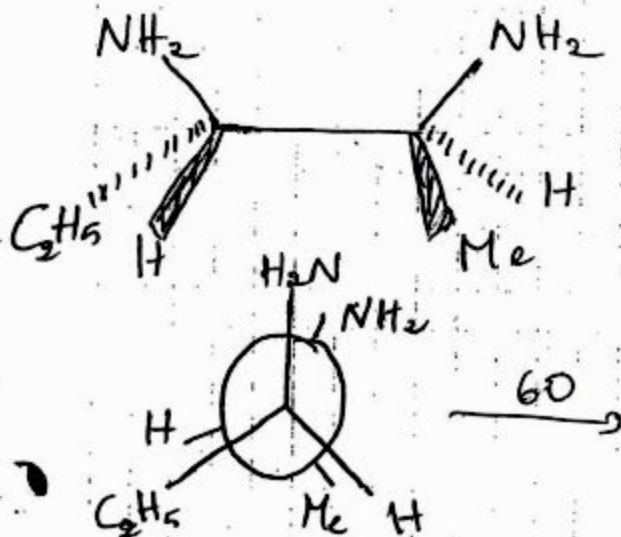
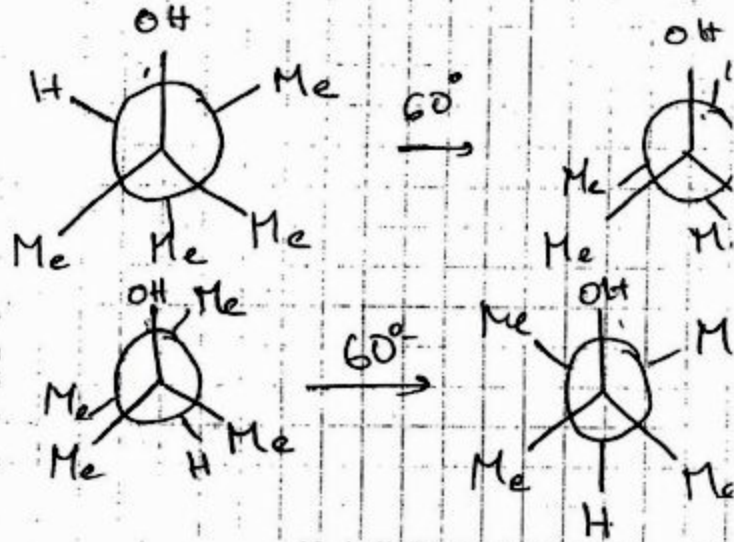
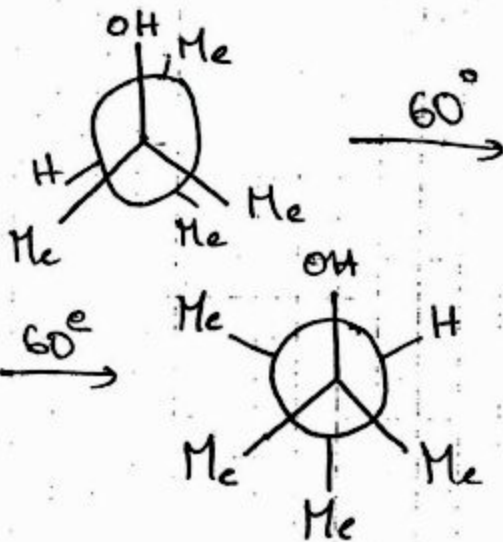


la forme la plus stable est gauche

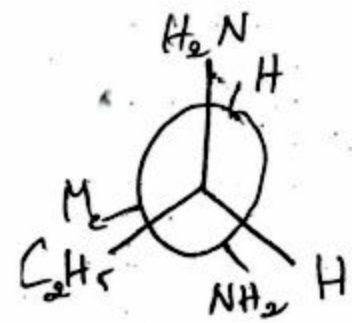
EXE :



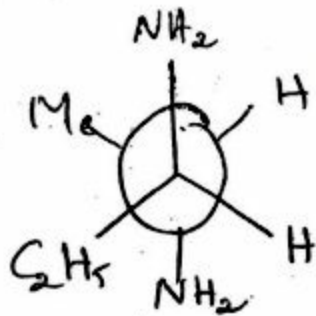
gauche partiellement décalée



gauche

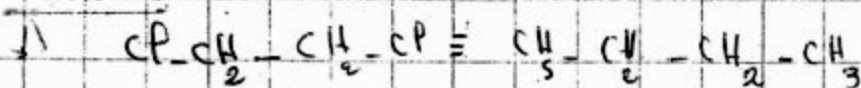


60°

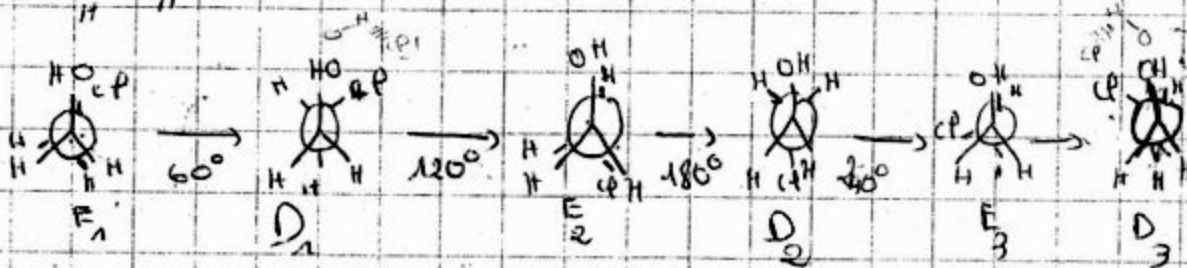
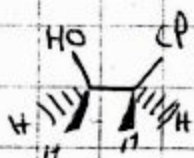
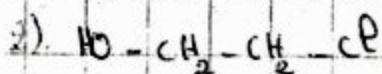


60°

Exercices:

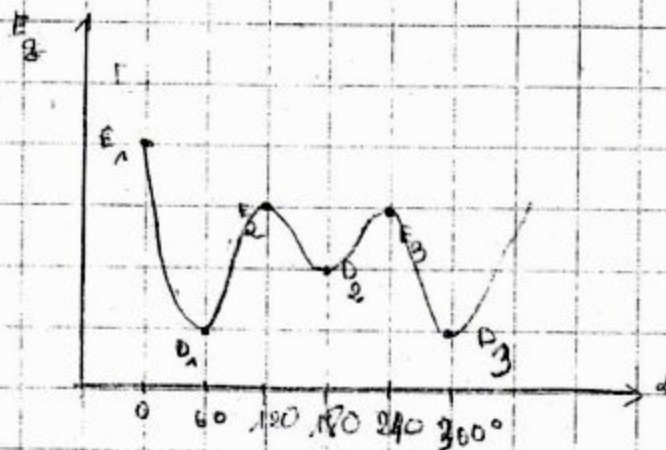


la même que le butane.



$$E_1 > E_2 = E_3 > D_2 > D_1 = D_3$$

$$D_2 > D_1 = D_3$$





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